Pentagon Awaits New Missile Guide

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WASHINGTON, July 16—A top secret report will be sent to the Pentagon soon that could go a long way toward determining the United States' continued ability to deter nuclear war.

The 150-page summary report, backed by a five-foot shelf of detailed findings, describes Project Strat-X—the code name for an effort to guide the Pentagon in its selection of a new breed of large, long-range missiles to succeed the force of 1,000 Minuteman missiles that now constitute the cornerstone of the country's nuclear arsenal.

The report and findings were drafted by a study group that worked quietly and largely unnoticed for eight months on the seventh floor of a modern white brick and glass office building situated among warehouses, welding shops and aging motels on the Virginia side of the Potomac River.

At times it office lights burned through the night, even on weekends.

Then on June 30, the 20 civilian scientists and engineers finished their work and left Washington to resume their careers with big corporations, universities and research organizations around the country.

The product of their labors will reach the Pentagon, four-tenths of a mile from their temporary offices, in about a month, after editorial polishing and printing.

Rapidly advancing technology threatens the current ICBM's. Improving accuracy raises the possibility several years hence of an enemy first strike aimed at knocking out Minutemen in their silos.

Improving missile defense systems may make it harder for both Minuteman and Polaris missiles to reach their targets.

So the Defense Department is looking toward a missile system large enough to house a myriad array of advanced devices designed to pene-

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trate foreseeable enemy defenses.

Instead of turning to its own first rate but hard pressed technical staff, the Pentagon went to the nearby Institute for Defense Analysis one of a number of military oriented nonprofit research organizations whose sole output is ideas and advice.

But for a project of such sweep, the institute found it lacked sufficient expertise on its own staff and scoured the country to assemble a 20-man group under Fred A. Payne, a vice president of the Marquard Corporation of Van Nuys, Calif.

A chemist by training, Mr. Payne has spent much of his adult life in weapons, including service as a top strategic weapons planner for the Pentagon from 1961 to 1965.

Working with a budget of about $1-million, the Strat-X team was given a mission whose outcome could influence the shape of a new program that officials say may run $5-billion to $10-billion or more.

But the group was assured complete cooperation from all the military services and intelligence agencies and was encouraged to go to any outside specialists for expert counsel.

While the Pentagon leans on such research organizations for a large variety of tasks, top officials insist there is little danger that the "tail will wag the dog," as has been suggested from time to time by Congressional critics.

"If the Pentagon becomes filled with decision makers who are intellectually weak, there would be a real danger of the Pentagon becoming captive to the think factories," said one top official.

Danger Doubted

"This may be a vain thing to say, but I don't believe we're in any danger at present."

In the case of the top priority intercontinental ballistic missile study, the Defense Department instructed the institute not to try to make specific recommendations but to narrow the range of choices and to marshall all the arguments it could find for and against the most promising alternatives.

Although many of the details of the project are classified, it is understood the group was told to figure on a missile carrying six to seven times the payload of existing ICBM's but to exercise its judgment on the design of the missile.

The panel started with 40 to 50 missile concepts that had been advanced at one time or another by the services and defense contractors.

One concept eliminated fairly early was the housing of missiles in untended, watertight firing "cacoons" in natural and man-made lakes and pools. The idea was dropped because of the difficulty of maintaining security around such missiles from sabotage, unauthorized firing or outright theft.

Also dropped was the proposal to carry the missiles on huge long-endurance airplanes that would seek survivability in frequent movement, both in the air and among a large number of airstrips. This would have been prohibitively expensive.

Surviving Systems

Among the surviving systems are missiles that would gain increased surviceability from their mobility, such as ICAM's on vessels resembling merchant ships, boxcars or large, off-road trucks; missiles such as the Polaris that gain protection by moving under the sea but in newly designed submarines or submerged barges, and ICBM's that would be actively defended against attack with their own antimissile missile defenses.

Some defense officials say that the Pentagon may decide on a single missile employed on two or more of these basing concepts. However, a decision probably will not be made on a new system until late this fall at the earliest.

Throughout its study, the research team frequently briefed defense officials on progress and asked their counsel.

It also went to outside experts, such as Dr. Edward Teller, on special weapons effects problems, to the Central Intelligence Agency for an analysis of Soviet weapons activity and expected developments, to scores of defense contractors for design studies, and to air Force Navy and Army specialists in such areas as radar technology, new propulsion fuels and advanced weapons designs.

Group Split 3 Ways

The group was split into three teams—a Blue Team to prepare detailed proposals on different missile basing schemes, a Red Team to play the role of Soviet planners to figure all the ways they would try to thwart each system, and an Evaluation Team to weight the rival claims and counterclaims, estimate the cost of the different systems and come up with an evaluation of each.

Project leaders say there were many table-thumping sessions.

They give this hypothetical example:

The Blue Team presents a plan for a sophisticated new Polaris-type submarine of superior design.

The Red Team argued that the submarine may be easily spotted and destroyed because of expected advances in the Soviet ability to detect any metal object deep under the sea.